10/055,878

~~09/776,763~~

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FILE 'HOME' ENTERED AT 12:43:42 ON 20 APR 2004

=> file biosis medline caplus wpids uspatfull
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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FULL ESTIMATED COST                                     0.21       0.21

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FILE 'USPATFULL' ENTERED AT 12:44:16 ON 20 APR 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

*** YOU HAVE NEW MAIL ***

=> s electrophoresis and plates
L1       42196 ELECTROPHORESIS AND PLATES

=> s l1 and plurality (4a) capillar?
L2         222 L1 AND PLURALITY (4A) CAPILLAR?

=> s l2 and plurality (4a) channel?
L3          57 L2 AND PLURALITY (4A) CHANNEL?

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4           57 DUP REM L3 (0 DUPLICATES REMOVED)

=> s l4 and electrophoresis/ti
L5            6 L4 AND ELECTROPHORESIS/TI

=> d l5 bib abs 1-6

L5   ANSWER 1 OF 6  USPATFULL on STN
AN     2003:298230  USPATFULL
TI     Multi channel capillary electrophoresis device & method
IN     Nordman, Eric S., Palo Alto, CA, UNITED STATES
       Reel, Richard T., Hayward, CA, UNITED STATES
PI     US 2003209436      A1   20031113
AI     US 2003-411948     A1   20030411 (10)
RLI    Continuation of Ser. No. US 2001-846855, filed on 1 May 2001, GRANTED,
       Pat. No. US 6596140
DT     Utility
FS     APPLICATION
LREP   HARNESS, DICKEY & PIERCE, P.L.C., P.O. BOX 828, BLOOMFIELD HILLS, MI,
       48303
CLMN   Number of Claims: 21
ECL    Exemplary Claim: 1
DRWN   5 Drawing Page(s)
LN.CNT 1163
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

09567863

AB Embodiments of a device and method are described which provide for control over the distortion of a sample zone upon exiting an **electrophoresis** separation channel. According to the teachings herein (i) the downstream regions of the channels, near the outlet ends, and/or (ii) the detection chamber, is/are configured so that distortion of one or more sample zones passing from the channels into and across the detection chamber can be controlled (e.g., reduced) in a fashion affording enhanced detectability. In certain embodiments, the lumens along the end regions of the separation channels progressively expand.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 6 USPATFULL on STN
AN 2002:292730 USPATFULL
TI Multi-channel capillary **electrophoresis** device and method
IN Nordman, Eric S., Palo Alto, CA, UNITED STATES
Reel, Richard T., Hayward, CA, UNITED STATES
PI US 2002162745 A1 20021107
US 6596140 B2 20030722
AI US 2001-846855 A1 20010501 (9)
DT Utility
FS APPLICATION
LREP PATTI SELAN, PATENT ADMINISTRATOR, APPLIED BIOSYSTEMS, 850 LINCOLN CENTRE DRIVE, FOSTER CITY, CA, 94404
CLMN Number of Claims: 46
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1301
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Embodiments of a device and method are described which provide for control over the distortion of a sample zone upon exiting an **electrophoresis** separation channel. According to the teachings herein (i) the downstream regions of the channels, near the outlet ends, and/or (ii) the detection chamber, is/are configured so that distortion of one or more sample zones passing from the channels into and across the detection chamber can be controlled (e.g., reduced) in a fashion affording enhanced detectability. In certain embodiments, the lumens along the end regions of the separation channels progressively expand.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 6 USPATFULL on STN
AN 2002:290474 USPATFULL
TI Capillary **electrophoresis** apparatus having filling/refilling system and methods for use thereof
IN Merenkova, Irena N., Moscow, RUSSIAN FEDERATION
Brevnov, Maxim, Moscow, RUSSIAN FEDERATION
PA Tetragen SA, Moscow, RUSSIAN FEDERATION (non-U.S. corporation)
PI US 6475361 B1 20021105
AI US 1999-378561 19990819 (9)
RLI Continuation-in-part of Ser. No. US 1998-27426, filed on 20 Feb 1998, now patented, Pat. No. US 6103083
DT Utility
FS GRANTED
EXNAM Primary Examiner: Tung, T.; Assistant Examiner: Noguerola, Alex
LREP Knobbe, Martens, OIson & Bear, LLP
CLMN Number of Claims: 55
ECL Exemplary Claim: 23
DRWN 19 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 1508
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to an **electrophoresis** apparatus

having a filling/refilling system and methods of using the same. The **electrophoresis** apparatus comprises a first buffer chamber comprising a solid portion, at least one inlet channel in said solid portion, and at least one outlet channel in said solid portion, wherein said at least one inlet channel is in fluid communication with at least one inlet port, said at least one outlet channel is in fluid communication with at least one outlet port and said at least one inlet channel is in fluid communication with said at least one outlet channel. The **electrophoresis** apparatus also comprises a **plurality** of **capillaries** having first ends, second ends, and intermediate portions disposed between said first ends and said second ends, wherein said first ends extend into said first buffer chamber and are in fluid communication with said at least one inlet channel and said at least one outlet channel.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 6 USPATFULL on STN
AN 2002:183551 USPATFULL
TI **Electrophoresis** apparatus
IN Yamakawa, Hironobu, Chiyoda, JAPAN
Miyake, Ryo, Tsukuba, JAPAN
Sasaki, Yasuhiko, Tsuchiura, JAPAN
Koide, Akira, Azuma, JAPAN
PI US 2002096432 A1 20020725
AI US 2002-41597 A1 20020110 (10)
PRAI JP 2001-10980 20010119
DT Utility
FS APPLICATION
LREP ANTONELLI TERRY STOUT AND KRAUS, SUITE 1800, 1300 NORTH SEVENTEENTH STREET, ARLINGTON, VA, 22209
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 600
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An **electrophoresis** apparatus in which an electrophoretic channel formed in a planar plate made of a transparent member and having satisfactory flat and smooth surfaces is irradiated with an excitation beam through the bottom surface or the top surfaces of the channel in a direction orthogonal thereto, and fluorescence from a sample is detected through a side surface of the channel, or the channel is irradiated with the excitation beam through a side surface of the channel while fluorescence from the sample is detected through the bottom surface or the top surface of the channel. With this arrangement, background light and stray light can be reduced so as to enhance the accuracy of detection of the **electrophoresis** apparatus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 6 USPATFULL on STN
AN 2002:143859 USPATFULL
TI Multi-dimensional **electrophoresis** apparatus
IN Guzman, Norberto A., P.O. Box 6006, East Brunswick, NJ, United States 08816
PI US 6406604 B1 20020618
AI US 1999-436186 19991108 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Warden, Jill; Assistant Examiner: Noguerola, Alex
LREP Squire, Sanders & Dempsey L.L.P.
CLMN Number of Claims: 28

09567863

ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 574
AB An **electrophoresis** apparatus is generally disclosed for sequentially analyzing a single sample or multiple samples having one or more analytes in high or low concentrations. The apparatus comprises a relatively large-bore transport **capillary** which intersects with a **plurality** of small-bore separation **capillaries** . Analyte concentrators, having antibody-specific (or related affinity) chemistries, are stationed at the respective inter-sections of the transport capillary and separation capillaries to bind one or more analytes of interest. The apparatus allows the performance of two or more dimensions for the optimal separation of analytes.

L5 ANSWER 6 OF 6 USPATFULL on STN
AN 2000:149575 USPATFULL
TI Microfabricated capillary array **electrophoresis** device and method
IN Simpson, Peter C., Oakland, CA, United States
Mathies, Richard A., Moraga, CA, United States
Woolley, Adam T., Belmont, MA, United States
PA The Regents of The University of California, Berkeley, CA, United States (U.S. corporation)
PI US 6143152 20001107
AI US 1997-965738 19971107 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Beisner, William H.
LREP Townsend and Townsend and Crew LLP
CLMN Number of Claims: 41
ECL Exemplary Claim: 1,34,36,39,41
DRWN 17 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 843
AB A capillary array **electrophoresis** (CAE) micro-plate with an array of separation channels connected to an array of sample reservoirs on the plate. The sample reservoirs are organized into one or more sample injectors. One or more waste reservoirs are provided to collect wastes from reservoirs in each of the sample injectors. Additionally, a cathode reservoir is also multiplexed with one or more separation channels. To complete the electrical path, an anode reservoir which is common to some or all separation channels is also provided on the micro-plate. Moreover, the channel layout keeps the distance from the anode to each of the cathodes approximately constant.

=> s l5 and perpendic?
L6 5 L5 AND PERPENDIC?

=> d l6 bib abs 1-5

L6 ANSWER 1 OF 5 USPATFULL on STN
AN 2003:298230 USPATFULL
TI Multi channel capillary **electrophoresis** device & method
IN Nordman, Eric S., Palo Alto, CA, UNITED STATES
Reel, Richard T., Hayward, CA, UNITED STATES
PI US 2003209436 A1 20031113
AI US 2003-411948 A1 20030411 (10)
RLI Continuation of Ser. No. US 2001-846855, filed on 1 May 2001, GRANTED, Pat. No. US 6596140
DT Utility

09567863

FS APPLICATION
LREP HARNESS, DICKEY & PIERCE, P.L.C., P.O. BOX 828, BLOOMFIELD HILLS, MI, 48303
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 1163
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Embodiments of a device and method are described which provide for control over the distortion of a sample zone upon exiting an **electrophoresis** separation channel. According to the teachings herein (i) the downstream regions of the channels, near the outlet ends, and/or (ii) the detection chamber, is/are configured so that distortion of one or more sample zones passing from the channels into and across the detection chamber can be controlled (e.g., reduced) in a fashion affording enhanced detectability. In certain embodiments, the lumens along the end regions of the separation channels progressively expand.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 2 OF 5 USPATFULL on STN
AN 2002:292730 USPATFULL
TI Multi-channel capillary **electrophoresis** device and method
IN Nordman, Eric S., Palo Alto, CA, UNITED STATES
Reel, Richard T., Hayward, CA, UNITED STATES
PI US 2002162745 A1 20021107
US 6596140 B2 20030722
AI US 2001-846855 A1 20010501 (9)
DT Utility
FS APPLICATION
LREP PATTI SELAN, PATENT ADMINISTRATOR, APPLIED BIOSYSTEMS, 850 LINCOLN CENTRE DRIVE, FOSTER CITY, CA, 94404
CLMN Number of Claims: 46
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1301
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Embodiments of a device and method are described which provide for control over the distortion of a sample zone upon exiting an **electrophoresis** separation channel. According to the teachings herein (i) the downstream regions of the channels, near the outlet ends, and/or (ii) the detection chamber, is/are configured so that distortion of one or more sample zones passing from the channels into and across the detection chamber can be controlled (e.g., reduced) in a fashion affording enhanced detectability. In certain embodiments, the lumens along the end regions of the separation channels progressively expand.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 3 OF 5 USPATFULL on STN
AN 2002:290474 USPATFULL
TI Capillary **electrophoresis** apparatus having filling/refilling system and methods for use thereof
IN Merenkova, Irena N., Moscow, RUSSIAN FEDERATION
Brevnov, Maxim, Moscow, RUSSIAN FEDERATION
PA Tetragen SA, Moscow, RUSSIAN FEDERATION (non-U.S. corporation)
PI US 6475361 B1 20021105
AI US 1999-378561 19990819 (9)
RLI Continuation-in-part of Ser. No. US 1998-27426, filed on 20 Feb 1998, now patented, Pat. No. US 6103083
DT Utility
FS GRANTED

09567863

EXNAM Primary Examiner: Tung, T.; Assistant Examiner: Noguerola, Alex
LREP Knobbe, Martens, OIson & Bear, LLP
CLMN Number of Claims: 55
ECL Exemplary Claim: 23
DRWN 19 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 1508
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to an **electrophoresis** apparatus having a filling/refilling system and methods of using the same. The **electrophoresis** apparatus comprises a first buffer chamber comprising a solid portion, at least one inlet channel in said solid portion, and at least one outlet channel in said solid portion, wherein said at least one inlet channel is in fluid communication with at least one inlet port, said at least one outlet channel is in fluid communication with at least one outlet port and said at least one inlet channel is in fluid communication with said at least one outlet channel. The **electrophoresis** apparatus also comprises a **plurality** of **capillaries** having first ends, second ends, and intermediate portions disposed between said first ends and said second ends, wherein said first ends extend into said first buffer chamber and are in fluid communication with said at least one inlet channel and said at least one outlet channel.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 4 OF 5 USPATFULL on STN
AN 2002:183551 USPATFULL
TI **Electrophoresis** apparatus
IN Yamakawa, Hironobu, Chiyoda, JAPAN
Miyake, Ryo, Tsukuba, JAPAN
Sasaki, Yasuhiko, Tsuchiura, JAPAN
Koide, Akira, Azuma, JAPAN
PI US 2002096432 A1 20020725
AI US 2002-41597 A1 20020110 (10)
PRAI JP 2001-10980 20010119
DT Utility
FS APPLICATION
LREP ANTONELLI TERRY STOUT AND KRAUS, SUITE 1800, 1300 NORTH SEVENTEENTH STREET, ARLINGTON, VA, 22209
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 600
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An **electrophoresis** apparatus in which an electrophoretic channel formed in a planar plate made of a transparent member and having satisfactory flat and smooth surfaces is irradiated with an excitation beam through the bottom surface or the top surfaces of the channel in a direction orthogonal thereto, and fluorescence from a sample is detected through a side surface of the channel, or the channel is irradiated with the excitation beam through a side surface of the channel while fluorescence from the sample is detected through the bottom surface or the top surface of the channel. With this arrangement, background light and stray light can be reduced so as to enhance the accuracy of detection of the **electrophoresis** apparatus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 5 USPATFULL on STN
AN 2002:143859 USPATFULL
TI Multi-dimensional **electrophoresis** apparatus
IN Guzman, Norberto A., P.O. Box 6006, East Brunswick, NJ, United States

09567863

08816

PI US 6406604 B1 20020618
AI US 1999-436186 19991108 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Warden, Jill; Assistant Examiner: Noguerola, Alex
LREP Squire, Sanders & Dempsey L.L.P.
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 574
AB An **electrophoresis** apparatus is generally disclosed for sequentially analyzing a single sample or multiple samples having one or more analytes in high or low concentrations. The apparatus comprises a relatively large-bore transport **capillary** which intersects with a **plurality** of small-bore separation **capillaries** . Analyte concentrators, having antibody-specific (or related affinity) chemistries, are stationed at the respective inter-sections of the transport capillary and separation capillaries to bind one or more analytes of interest. The apparatus allows the performance of two or more dimensions for the optimal separation of analytes.

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=> file biosis medline caplus wpids uspatfull
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	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE 'CAPLUS' ENTERED AT 16:06:31 ON 20 APR 2004
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FILE 'USPATFULL' ENTERED AT 16:06:31 ON 20 APR 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

*** YOU HAVE NEW MAIL ***

=> s 4D (4a) biochip?
L1 4 4D (4A) BIOCHIP?

=> d l1 bib abs 1-4

L1 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:590730 CAPLUS
DN 139:114079
TI Four dimensional biochip design for high throughput applications and methods of using the four dimensional biochip
IN Liu, Ben Hui
PA Bio-Informatics Group, Inc., USA
SO U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003143722	A1	20030731	US 2002-55878	20020128
	WO 2003064703	A1	20030807	WO 2003-US48	20030128

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-55878 A 20020128
AB The present invention provides a **4D biochip** containing m 3D **biochips** having n capillaries, wherein the n capillaries each contain a biol. factor, and methods for preparing and using the **4D**

09567863

biochip to provide rapid, efficient assays of large quantities of samples and/or factors.

L1 ANSWER 2 OF 4 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2004-031412 [03] WPIDS
DNN N2004-024757 DNC C2004-010426
TI New biochip containing plates of capillaries through which a regent is serially passed provides a means for high throughput parallel assay of a number of biological samples for a number of biological factors.
DC A89 B04 D16 J04 L03 T06
IN LIU, B H
PA (BIOI-N) BIO-INFORMATICS GROUP INC
CYC 102
PI US 2003143722 A1 20030731 (200403)* 23p
WO 2003064703 A1 20030807 (200403) EN
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
AU 2003210110 A1 20030902 (200422)
ADT US 2003143722 A1 US 2002-55878 20020128; WO 2003064703 A1 WO 2003-US48 20030128; AU 2003210110 A1 AU 2003-210110 20030128
FDT AU 2003210110 A1 Based on WO 2003064703
PRAI US 2002-55878 20020128
AN 2004-031412 [03] WPIDS
AB US2003143722 A UPAB: 20040112
NOVELTY - A biochip comprising at least two plates containing cylindrical capillaries and channels to allow passage of a reagent serially though all the capillaries of each plate, is new.

DETAILED DESCRIPTION - A biochip comprising at least two plates where each plate defines a number of cylindrical capillaries, each with two opposed ends, including at least one capillary comprising a reagent inlet and at least one comprising a reagent outlet. The plate defines a number of channels oriented substantially perpendicular to the capillaries and configured to selectively operably connect adjacent capillaries to form a continuous passage from the reagent inlet to the reagent outlet, the channels also configured to direct reagent through a capillary and serially through all the capillaries defined by the plate. The plates are positioned to align the capillaries from the first and second plate.

INDEPENDENT CLAIMS are also included for:

(1) fabricating a biochip defining a number of connected capillaries, comprising:

(a) forming a medial plate having two opposed surfaces which defines a number of cylindrical capillaries, each having two opposed ends;

(b) forming a pair of end plates, each configured to operably engage one of the medial plate surfaces and each defining a series of channels oriented perpendicular to the capillaries which selectively connect adjacent capillaries when the end plates are operably engaged with the medial plate;

(c) securing the end plates to the medial plate surfaces to form a continuous passage from a reagent inlet capillary to a reagent outlet capillary, the passage extending the length of each capillary and serially though all the capillaries; and

(d) aligning at least two of the medial plates to align the cylindrical capillaries of the medial plates to form a continuous passage

(2) fabricating a biochip defining a number of connected capillaries, comprising:

(a) providing a mold defining a medial plate having two opposed surfaces, the mold having a number of cylindrical rods and a series of

connecting members oriented perpendicular to the rods about the medial plate surfaces and selectively connecting adjacent rod ends;

(b) introducing a polymeric material into the mold to form the medial plate;

(c) releasing the plate from the mold;

(d) sealing opposed surfaces of the plate with corresponding end plates to form a continuous passage from a reagent inlet capillary to a reagent outlet capillary, the passage extending the length of each capillary and serially though all the capillaries; and

(e) aligning at least two of the medial plates to align the cylindrical capillaries to form an essentially continuous passage;

(3) fabricating a biochip defining a number of connected capillaries, comprising:

(a) etching a number of cylindrical capillaries in a medial plate having two opposed surfaces, each capillary having two opposed ends;

(b) selectively etching a number of channels orientated perpendicular to the capillaries, between adjacent capillaries on each medial plate surface;

(c) sealing medial plate surfaces with corresponding end plates form a continuous passage from a reagent inlet capillary to a reagent outlet capillary, the passage extending the length of each capillary and serially though all the capillaries; and

(d) aligning at least two of the medial plates to align the cylindrical capillaries of the medial plates to form an essentially continuous passage;

(4) testing multiple sample parallel bioassays, comprising:

(a) providing the novel biochip;

(b) immobilizing a biosample on the inner walls of each of the cylindrical cylinders;

(c) flowing a test sample through the cylindrical capillaries; and

(d) assaying for interaction between the immobilized biosample and the test sample; and

(5) a **4D** chip comprising m **biochip** means, where m is an integer from 2-100000, and where each pair of adjacent 3D biochip means are operably connected by aligning capillaries present in one of the pair with capillaries present in the other.

USE - The invention is used in high throughput screening for drug development and all other genomic and proteomics research an applications by enabling processing of large numbers of biosamples, such as patients, suspects, antigens, for a large number of biological factors, such as genes, mutations, single nucleotide polymorphisms (SNP), proteins or antibodies.

Dwg.1/8

L1 ANSWER 3 OF 4 USPATFULL on STN
AN 2004:24775 USPATFULL
TI Biochip preparation method
IN Lin, Yu-Ting, Taipei, TAIWAN, PROVINCE OF CHINA
Shen, Yu-Chang, Taipei, TAIWAN, PROVINCE OF CHINA
Sir, In-Shan, Kaohsiung, TAIWAN, PROVINCE OF CHINA
PA BENQ CORPORATION (non-U.S. corporation)
PI US 2004018614 A1 20040129
AI US 2003-616520 A1 20030709 (10)
PRAI TW 2002-91115598 20020712
DT Utility
FS APPLICATION
LREP Ladas & Parry, Suite 2100, 5670 Wilshire Boulevard, Los Angeles, CA, 90036
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 8 Drawing Page(s)
LN.CNT 383

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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A preparation method for biochips. The method comprises spraying a hydrophobic material onto a substrate by a micro injecting process to form a hydrophobic region thereon, wherein the hydrophobic region separates a plurality of partitions on the substrate, and immobilizing a probe on the partition by the micro injecting process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 4 OF 4 USPATFULL on STN
AN 2003:207364 USPATFULL
TI Four dimensional biochip design for high throughput applications and methods of using the four dimensional biochip
IN Liu, Ben Hui, Raleigh, NC, UNITED STATES
PA BIO-INFORMATICS GROUP, INC., Cary, NC, UNITED STATES, 27511 (U.S. corporation)
PI US 2003143722 A1 20030731
AI US 2002-55878 A1 20020128 (10)
DT Utility
FS APPLICATION
LREP OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET, ALEXANDRIA, VA, 22314
CLMN Number of Claims: 89
ECL Exemplary Claim: 1
DRWN 8 Drawing Page(s)
LN.CNT 1460
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a **4D biochip** containing m 3D **biochips** having n capillaries, wherein the n capillaries each contain a biological factor, and methods for preparing and using the **4D biochip** to provide rapid, efficient assays of large quantities of samples and/or factors.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=>